October 1, 2007

FINDING OF NO SIGNIFICANT IMPACT
TO ALL INTERESTED GOVERNMENTAL AGENCIES AND PUBLIC GROUPS

As required by state and federal rules for determining whether an Environmental Impact Statement is necessary, an environmental review has been performed on the proposed action below:

Project	Jordan Sanitary Sewer System Improvements
Location	Jordan, Montana
Project Number	C304143-01
Total Cost	$1,422,953

The Town of Jordan has proposed upgrades to the sanitary sewer system within the community. The overall project involves replacing approximately 1,525 lineal feet of sewer main with new 8" PVC main, reconstructing the one existing lift station to prevent accidental discharge and reconstruction of the existing lagoon facility to a new three cell lagoon system with mechanical mixing.

The State Revolving Fund loan program may provide partial funding for the proposed project. Environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species, and historical sites are not expected to be adversely impacted as a result of the proposed project. Public participation during the planning process generally demonstrated support for the selected alternative. No significant long-term environmental impacts were identified. An environmental assessment (EA), which describes the project and analyzes impacts in more detail, is available for public review at the following locations:

Department of Environmental Quality
1520 East Sixth Avenue
P.O. Box 200901
Helena, MT 59620-0901

Town of Jordan
Town Office
PO Box 484
Jordan, MT 59337

Comments supporting or disagreeing with this decision may be submitted for consideration by the Department of Environmental Quality. After evaluating the comments received, the agency will make a final decision. However, no administrative action will be taken on the project for at least 30 calendar days after release of the Finding of No Significant Impact.

Sincerely,

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Todd Teegarden, Bureau Chief
Technical and Financial Assistance Bureau
Planning, Prevention & Assistance Division

TOWN OF JORDAN
WASTEWATER TREATMENT SYSTEM

ENVIRONMENTAL ASSESSMENT

I COVER SHEET

A. PROJECT IDENTIFICATION

Name of Project: Town of Jordan
Sanitary Sewer System Project
Applicant: Town of Jordan
Address: P.O. Box 484
Jordan, MT 59337

B. CONTACT PERSON

Name: Mary Ann Engdahl, Mayor
Address: P.O. Box 484
Jordan, MT 59337
Telephone: (406) 557-2692

C. ABSTRACT

1. BACKGROUND

The Town of Jordan, through the Sanitary Sewer System Preliminary Engineering Report April 2006 (PER), prepared by Great West Engineering, has identified the need to upgrade the existing community wastewater treatment facility. The report identifies improvements needed to protect water quality within the aquifer and receiving stream (Big Dry Creek).

The Town of Jordan is currently served by a central wastewater collection and treatment system. The original gravity sewer collection system and lagoons were built in 1951, the lift station, force main and wastewater treatment facility were constructed in 1968. The current sanitary sewer system has several identified problems which this proposed project seeks to correct.

- Several areas of the collection system within the community have failing collection mains. Four sections of main are proposed to be replaced within the scope of this proposed project. These new mains would be placed at correct slopes to enhance sewage collection and flow.

- The lift station facility does not currently have backup power, which has resulted in raw wastewater discharge to Big Dry Creek during power outages. This has resulted in violations of the State Water Quality Act and the Public Water Supply Act. The existing lift station pumping equipment has reached the end of its useful life and is proposed to be replaced. Backup power is proposed to be added.

- The existing two cell facultative lagoon system performs adequately under current discharge standards, but will not meet the expected discharge limits in a new permit set to be issued April 1, 2009. The existing lagoons are

showing significant amounts of erosion due to wave and ice action over the years. Also, sludge removal and disposal is needed. The proposed project calls for a new three cell facultative lagoon system with mechanical mixers, allowing for a greater level of treatment and operational flexibility before discharge to Big Dry Creek.

2. DESCRIPTION OF PROJECT

Of the alternatives available to the Town, three discharge methods, one lift station alternative, five wastewater treatment and four collection system alternatives were analyzed. Several factors were used to evaluate these alternatives, including cost effectiveness, operational simplicity, system reliability, treatment performance, regulatory issues, and environmental impacts. As determined by the engineer, based on the aforementioned criteria, rehabilitation of the lift station, replacement of four areas of selected sewer mains and construction of a three cell facultative lagoon system within the footprint of the existing lagoons were identified as the preferred alternatives for this project.

Federal and State grant/loan programs will help fund the project. Environmentally sensitive characteristics such as wetlands, floodplains and threatened or endangered species are not expected to be adversely impacted as a result of the proposed project. No significant long-term environmental impacts were identified.

3. AGENCY ACTION, APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES

Under Montana law, (75-6-112, MCA), no person, including a municipality, may construct, extend, or use a public sewage system until the Montana Department of Environmental Quality (DEQ) has reviewed and approved the plans and specifications for the project. Under the Montana Water Pollution Control State Revolving Fund Act, the DEQ may loan money to municipalities for construction of public sewage systems.

The renovated lift station, sewer mains and wastewater treatment facility will be constructed in accordance with State design standards. A Stormwater Discharge General Permit and a construction-dewatering permit from the DEQ may be required prior to construction. No additional permits will be required from the State Revolving Fund (SRF) section of the DEQ for this project after the review and approval of the submitted plans and specifications and authorization to award the construction contract. A permit for construction in the floodplain (floodplain development permit) will be required from Garfield County. There are no known or identified water supply wells within 500 feet of the existing or proposed lagoon system.

It is recognized by the department, designer and community leadership that this phase of improvements may not allow for continued compliance with future discharge standards. The proposed improvements may not allow for ammonia, nitrogen or fecal coliform (e-coli) compliance in future permit cycles. This was factored into the planning document (PER) and it has been proposed that if future in-stream standards are such that continued discharge can not meet permit conditions, the Town may need to undergo another phase of design and improvements to move toward more advanced treatment, land application or a total retention pond approach.

The DEQ, Technical & Financial Assistance Bureau, has prepared this Environmental Assessment (EA) because the DEQ received a Preliminary Engineering Report for its review and written approval, in addition to an application for a State Revolving Fund (SRF) loan for the project. This EA has been prepared to satisfy the requirements of the Montana Environmental Policy Act (MEPA).

D. COMMENT PERIOD

Thirty (30) calendar days

II. PURPOSE AND NEED FOR ACTION

The Town of Jordan is located in central Montana in central Garfield County. Jordan is located approximately 83 miles northwest of Miles City, MT (See Figure 1 – Site Map). The Town of Jordan lies in the northwest quarter of Section 17, T18N, R38E, M.P.M. The lagoons are located in the northwest quarter of Section 16, T18N, R38E, M.P.M. The Town planning area is shown on Figure 2. The two-cell lagoon, lift station, and force main were constructed in 1968. The lagoon is in need of improvements in order to protect the adjacent Big Dry Creek. The lagoon system was designed to discharge treated wastewater to Big Dry Creek and still operates this way today. The system currently discharges on a regular basis and meets discharge requirements.

The control equipment for the pumps in the lift station is old, does not provide power backup in the event of a power outage and does not remotely signal operations staff when not operational. This issue has resulted in discharge of untreated raw wastewater, on occasion resulting in a violation of the State Clean Water Act.

The proposed project is important for several reasons related to public health and environmental protection. The new lagoon system will be designed to provide for a three cell configuration, allowing operations staff more flexibility in treatment and maintenance. Also, mechanical agitation will be installed to enhance mixing and improve treatment performance. The new design will provide for the holding capacity to meet current facultative lagoon standards. Native clay soils are proposed to create the liner system for the proposed new lagoons.

The collection system was found to need repairs in four primary locations. The existing condition of mains in these areas does not allow for proper cleaning and maintenance. It also results in infiltration of groundwater during wet weather conditions. This groundwater intrusion can lead to inadequate treatment within the lagoon system during large storm events by reducing the holding time capacity of the lagoons.

Based on the concerns related to public health and environmental protection, the Town of Jordan hired an engineer to prepare a Preliminary Engineering Report (PER) to address the wastewater treatment system problems in the Town.

Montana Department of
ENVIRONMENTAL QUALITY

Figure 1 Site Location Map – Jordan, MT

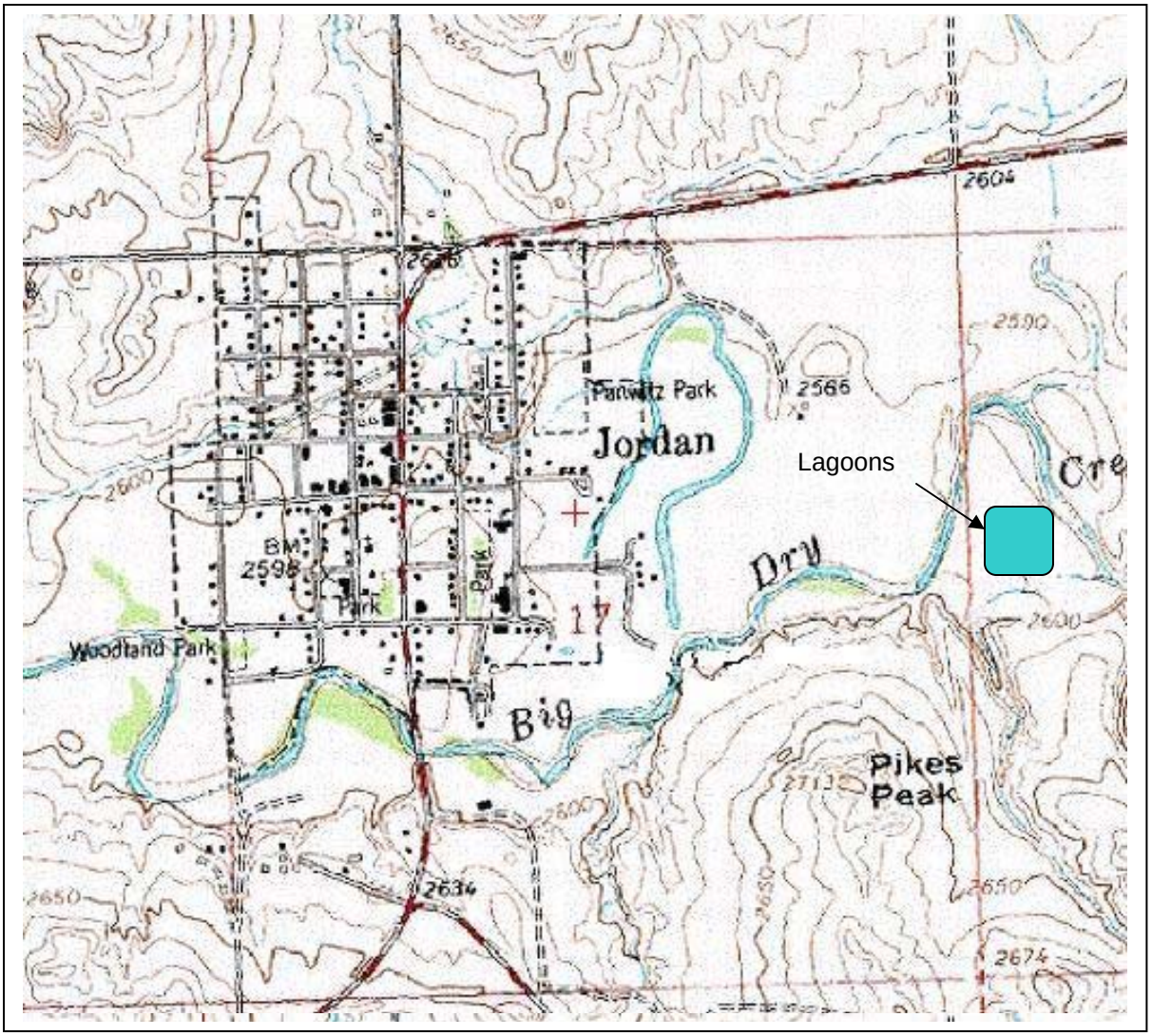

Figure 2
Study Area Boundary Map

III TECHNOLOGIES INVESTIGATED INCLUDING THE PROPOSED ACTION

A. WASTEWATER TREATMENT TECHNOLOGIES

A total of five treatment technologies were investigated as possible solutions to improve or replace the existing treatment facility in the PER. An overview of each treatment technology available to the Town of Jordan was analyzed in detail. The treatment technologies discussed in the PER included the following:

1. Total Retention Lagoons
2. Facultative Lagoons With Discharge *
3. Facultative Lagoons With Land Application
4. Aerated Lagoons With Discharge *
5. Aerated Lagoons With Land Application *

6. No Action Alternative

* All surface water discharging alternatives included discharge to Big Dry Creek.

1. TOTAL RETENTION PONDS

Total retention treatment system consists of large, shallow ponds that rely on evaporation to dispose the wastewater effluent. These systems require considerably more land area than non-aerated discharging facultative or aerated lagoon systems. Total retention treatment systems are simple to operate and maintain. A discharge permit is not required, therefore regulation is minimal. Because this technology is practical in terms of environmental and regulatory considerations, this technology was further evaluated.

2. FACULTATIVE LAGOONS WITH DISCHARGE

Facultative lagoons with discharge are currently what the Town uses in treating wastewater, but the two cell method does not allow operational flexibility. A new three cell lagoon system with mechanical agitation within the existing lagoon footprint was evaluated as a method of enhancing both treatment and operational flexibility. A discharge permit is required with this alternative and tighter treatment standards in the future were evaluated. Because this technology is practical in terms of environmental and regulatory considerations, this technology was further evaluated.

3. FACULTATIVE LAGOONS WITH LAND APPLICATION

Facultative lagoons with land application are evaluated within the report and have the advantage over 2. above by not requiring a discharge permit at this time. A new three cell lagoon system with mechanical agitation within the existing lagoon footprint was evaluated as a method of enhancing both treatment and operational flexibility along with land application. Land application requires a land area large enough to allow application at agronomic rates and requires that soils are of a quality to allow for evapotranspiration. Land application also requires the use of pumping equipment to deliver the effluent and an irrigation system appropriate for the delivery. Because this technology is practical in terms of environmental and regulatory considerations, this technology was further evaluated.

4. AERATED LAGOONS WITH DISCHARGE

Aerated lagoons with discharge were evaluated and could be accomplished within the footprint of the existing lagoon facility. Aerated lagoons allow for enhanced biological treatment and faster treatment rates. A new four cell lagoon system with blower equipment and aerators in three primary cells would be utilized along with a larger quiescent cell. Aerated lagoon systems are more operation intensive and also energy intensive. A discharge permit is required with this alternative and tighter treatment standards in the future were evaluated. Because this technology is practical in terms of environmental and regulatory considerations, this technology was further evaluated.

5. AERATED LAGOONS WITH LAND APPLICATION

Aerated lagoons with land application were evaluated and could be accomplished within the footprint of the existing lagoon facility with the exception of the application area. Aerated lagoons allow for enhanced biological treatment and faster treatment rates. A new four cell lagoon system with blower equipment and aerators in three primary cells would be utilized, along with a larger quiescent cell. Aerated lagoon systems are more operation intensive and also energy intensive. Land application requires a land area large enough to allow application at agronomic rates and requires that soils are of a quality to allow for evapotranspiration. Land application also requires the use of pumping equipment to deliver the effluent and an irrigation system appropriate for the delivery. Because this technology is practical in terms of environmental and regulatory considerations, this technology was further evaluated.

6. NO ACTION

No action, or no improvements to the existing treatment system, would mean the existing two-cell pond would continue to deteriorate and discharge to Big Dry Creek. This system would be unable to meet ammonia and fecal coliform limits, which may both be included in the new discharge permit to be issued after April 1, 2009. The No Action alternative would leave the Town in the situation of not being able to comply with future permit conditions and would not remedy the substantial deficiencies with the existing system. The no action alternative was not further considered for the reasons stated.

B. WASTEWATER DISPOSAL ALTERNATIVE

A total of three disposal alternatives were evaluated within the PER. They included the 1) Discharge to Big Dry Creek alternative; 2) Evaporation alternative; and 3) Land application. These various alternatives were all considered viable and were further considered within the PER as a component of each of the Treatment methods discussed in III.A. above.

C. COLLECTION SYSTEM ALTERNATIVES

A total of four collection system alternatives including the “no action” alternative were evaluated within the PER. The collection system alternatives were 1) No Action; 2) Repair Identified Problem Areas; 3) Replace Select Pipes with Substandard Slopes and 4) Repair Identified Problem Areas and Replace Select Pipes with Substandard Slopes. Each of these were further evaluated within the PER.

D. LIFT STATION AND FORCE MAIN

The PER concludes early on that only one option exists with respect to the Lift Station and Force Main. Rehabilitation of the existing facility and provision of back-up power were the only alternatives further considered with respect to this system component.

IV FEASIBLE ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. TREATMENT FACILITY ALTERNATIVES

Of the previous five treatment systems and the "no action" alternative defined, all were further evaluated in the PER.

1. TOTAL RETENTION PONDS
2. FACULTATIVE LAGOONS WITH DISCHARGE
3. FACULTATIVE LAGOONS WITH LAND APPLICATION
4. AERATED LAGOONS WITH DISCHARGE
5. AERATED LAGOONS WITH LAND APPLICATION
6. NO ACTION

1. ALTERNATIVE 1: TOTAL RETENTION PONDS

Alternative 1 would split the existing lagoon into three separate ponds that would serve as primary and the secondary ponds. The purchase of approximately 10 acres of additional property across the creek to the northeast of the lagoon site would be required to site the approximately 5 acres of new retention lagoons. This alternative utilizes as much of the existing embankment material as possible, but would result in a stream crossing pipeline and additional disturbance along the stream bank. The retention ponds would have to be constructed and put into operation while the sludge in the old lagoons is removed and the ponds are re-constructed. This alternative would also include construction of the dike tops to two feet above the estimated floodplain elevation. Based on a comparison of cost, operability, energy, land requirements, environmental issues, regulatory issues, and treatment performance, this alternative was not selected as the preferred alternative.

2. ALTERNATIVE 2: FACULTATIVE LAGOONS WITH DISCHARGE

Alternative 2 would use the existing lagoon footprint as the location of a new three cell lagoon system with mechanical agitation equipment. The three cell system would provide for enhanced operational flexibility and lagoon maintenance. It is predicted in the PER that this design would enhance BOD_5 and TSS removal efficiencies adequately to comply with future TMDL and discharge limitations. Discharge to Big Dry Creek would continue with this alternative. Based on a comparison of cost, operability, energy, land requirements, environmental issues, regulatory issues, and treatment performance, this alternative was selected as the preferred alternative.

3. ALTERNATIVE 3: FACULTATIVE LAGOONS WITH LAND APPLICATION

Alternative 3 would use the existing lagoon footprint as the location of a new three cell lagoon system with mechanical agitation equipment. The three cell system would provide for enhanced operational flexibility and lagoon maintenance. Discharge to Big Dry Creek would be avoided with this alternative, but land area and soils issues were evaluated and the PER concluded the area soils would not support land application of the highly saline wastewater stream. Based on a comparison of cost, operability, energy, land requirements, environmental issues,

regulatory issues, and treatment performance, this alternative was not selected as the preferred alternative.

4. ALTERNATIVE 4: AERATED LAGOONS WITH DISCHARGE

   Alternative 4 would use the existing lagoon footprint as the location of a new four cell lagoon system with aeration capabilities within three primary treatment cells and a larger quiescent cell for settling and nutrient reduction. The four cell system would provide for enhanced operational flexibility and lagoon maintenance, but would also increase the operational intensity of the facility. Discharge to Big Dry Creek would continue with this alternative. Based on a comparison of cost, operability, energy, land requirements, environmental issues, regulatory issues, and treatment performance, this alternative was not selected as the preferred alternative.

5. ALTERNATIVE 5: AERATED LAGOONS WITH land application

   Alternative 5 would use the existing lagoon footprint as the location of a new four cell lagoon system with aeration capabilities within three primary treatment cells and a larger quiescent cell for settling and nutrient reduction. The four cell system would provide for enhanced operational flexibility and lagoon maintenance, but would also increase the operational intensity of the facility. Discharge to Big Dry Creek would be avoided with this alternative, but land area and soils issues were evaluated and the PER concluded the area soils would not support land application of the highly saline wastewater stream. Based on a comparison of cost, operability, energy, land requirements, environmental issues, regulatory issues, and treatment performance, this alternative was not selected as the preferred alternative.

6. ALTERNATIVE 6: NO ACTION

   Alternative 6 would continue to use the existing treatment system with no improvements. Given the extensive erosion of existing dikes and the build-up of sludge within the existing cells, this alternative was not considered reasonable and was not selected as the preferred alternative.

B. COLLECTION SYSTEM ALTERNATIVES

The following lift station alternatives were evaluated in the PER:

1. No Action

   The no action alternative would result in continuing to use the existing collection system with no improvements. Given the inability to jet and clean certain sections of sewer main and the known failures which likely result in leakage of untreated wastewater to groundwater, this alternative was not considered reasonable and was not selected as the preferred alternative.

2. Repair Identified Problem Areas

   This alternative would correct failed sewer mains in four critical areas of Town where maintenance personnel can not currently perform appropriate cleaning and

maintenance. This alternative would result in replacement of approximately 1,525 lineal feet of clay mains and 8 manholes. All four of these sites involve 6" clay sewer piping which would be replaced with 8" PVC sewers allowing for improved flow conditions and maintenance. Based on a comparison of cost, operability, energy, land requirements, environmental issues, regulatory issues, and treatment performance, this alternative was selected as the preferred alternative.

3. Replace Select Pipes with Substandard Slopes

   This alternative would correct sewer mains in extensive areas of Town in order to bring those lines up to current design standards. This alternative would result in replacement of approximately 6,675 lineal feet of clay mains and 21 manholes. All of these sites involve 6" clay sewer piping which would be replaced with 8" PVC sewers. It is not expected this work would result in substantial improvements to the collection system based on past performance. Based on a comparison of cost, operability, energy, land requirements, environmental issues, regulatory issues, and treatment performance, this alternative was not selected as the preferred alternative.

4. Repair Identified Problem Areas and Replace Select Pipes with Substandard Slopes

   This alternative would combine the efforts proposed in items 2 & 3 above. Based on a comparison of cost, operability, energy, land requirements, environmental issues, regulatory issues, and treatment performance, this alternative was not selected as the preferred alternative.

C. LIFT STATION ALTERNATIVES

There were really two alternatives considered with respect to lift station improvements. The first involved use of submersible pumping equipment placed into the existing wet well, with modifications to that existing manhole structure. The second alternative was replacement of the lift station with a package lift station with wet well & dry well configuration. It was concluded in the PER that the package system would not improve the confined space entry situation for the Town and that the cost would be similar or higher. Therefore, that alternative was not further considered.

The preferred alternative proposes to install a new submersible pump and controls at the existing lift station and to add a new manhole ring to raise the manhole a minimum of 3 feet. This effort is aimed at elevating the lift station surface above the adjacent floodplain to help prevent future overflow events. A new stationary generator with "auto on" controls is recommended due to the short duration which can result in back-ups and discharge from the sewer system.

D. COST COMPARISON FOR ALTERNATIVES USING PRESENT WORTH ANALYSIS

The present worth analysis is a method of comparing alternatives in present day dollars and can be used to determine the most cost-effective alternative. An interest rate of 6.0% over the 20-year planning period (Design Year 2028) was used in the analysis. Salvage values were not utilized because all alternatives

considered were assessed as having a 20 year life with no salvage. Summaries of the present worth analyses of the acceptable treatment alternatives are provided in Table 1.

TABLE 1 - ECONOMIC EVALUATION OF TREATMENT ALTERNATIVES

	Total Capital Cost	Yearly O&M Change	O&M Present Worth Value	**Total Present Worth**
ALT. 1 - Total Retention Lagoons	$1,876,710	$3,200	$36,704	**$1,913,414**
ALT. 2 – Facultative Lagoons w/ Discharge	$969,485	$13,300	$ 152,550	**$1,122,035**
ALT. 3 – Facultative Lagoons w/ Land Application	$1,350,009	$4,230	$ 48,518	**$1,398,527**
ALT. 4 – Aerated Lagoons w/ Discharge	$1,215,550	$25,832	$ 296,291	**$1,511,841**
ALT. 5 – Aerated Lagoons w/ Land Application	$1,691,591	$20,156	$ 231,188	**$1,922,779**
ALT. 6 – No Action	NA	NA	NA	**NA**

Summaries of the present worth analyses of the acceptable collection system alternatives are provided in Table 2

TABLE 2 - ECONOMIC EVALUATION OF COLLECTION SYSTEM ALTERNATIVES

	Total Capital Cost	Yearly O&M Change	O&M Present Worth Value	**Total Present Worth**
ALT. 1 – No Action	NA	NA	NA	**NA**
ALT. 2 – Repair Identified Problem Areas	$ 222,561	$ 0	$ 0	**$ 222,561**
ALT. 3 – Correct Pipes w/ Substandard Slopes	$ 660,204	$ 0	$ 0	**$ 660,204**
ALT. 4 - Repair Problem Areas and Substandard Slope Pipes	$ 871,445	$ 0	$ 0	**$ 871,445**

Summaries of the present worth analyses of the lift station alternative is provided in Table 3

TABLE 3 - ECONOMIC EVALUATION OF LIFT STATION ALTERNATIVES

	Total Capital Cost	Yearly O&M Change	O&M Present Worth Value	**Total Present Worth**
ALT. 1 – New pumps, elevate surface and new controls	$184,461	$0	$0	**$184,461**

E. ALTERNATIVE ANALYSIS

1. WASTEWATER TREATMENT

The elimination of the option for land discharge, due to existing soils and water salinity, results in two of the alternatives dropping out of the matrix. Only alternatives 1, 2, 4 & 6 were viable after that professional decision was reached. The remaining alternatives were scored via a matrix based on technical feasibility, environmental impacts, cost, public health and safety, operation and maintenance. The preferred alternative was determined to be Alternative 2 Facultative Lagoons with Discharge. A schematic of the preferred alternative is included in Figure 3.

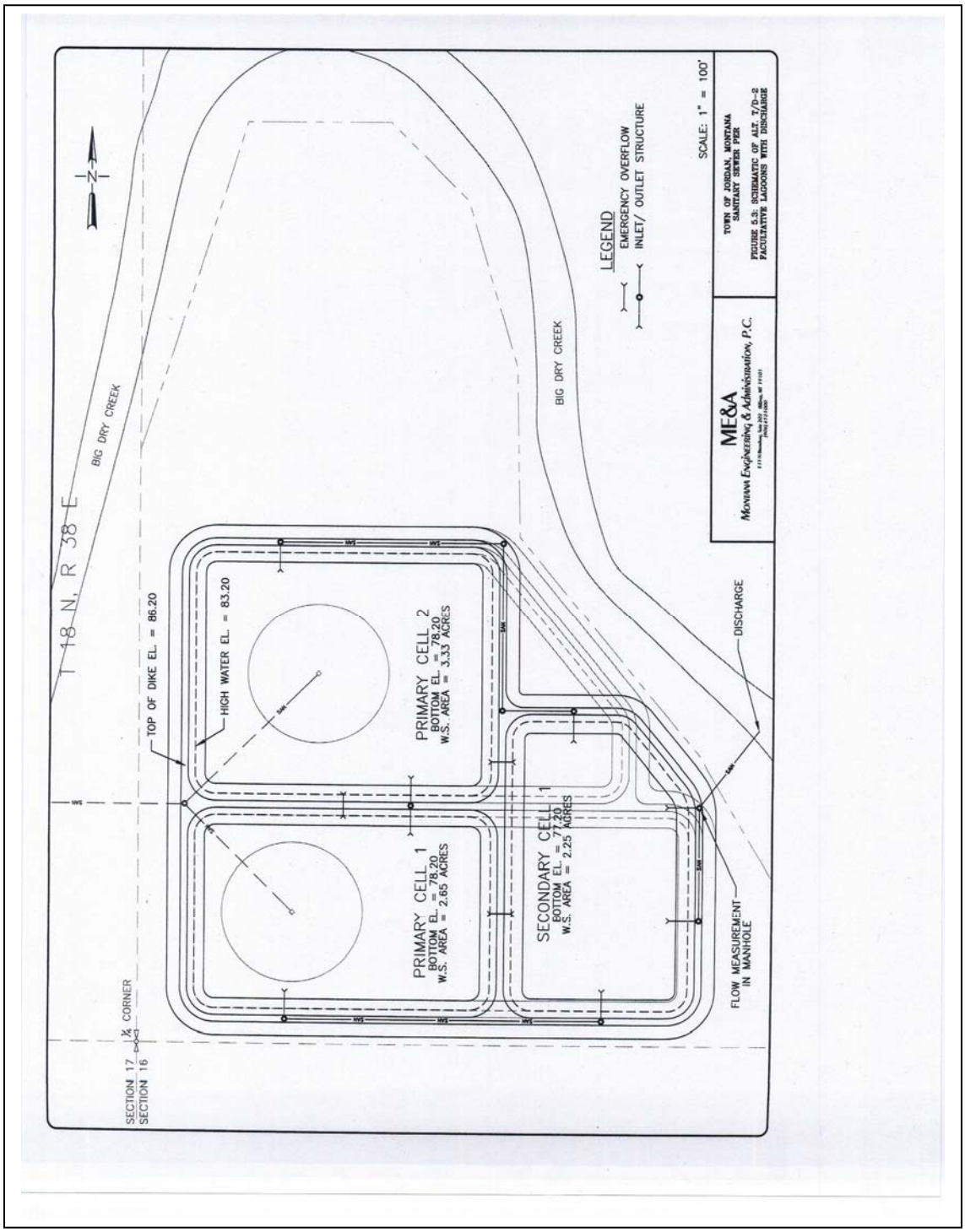

Figure 3
Recommended Alternative
Facultative Lagoons with Discharge Alternative 2

2. COLLECTION SYSTEM

The collection system alternatives were also compared using the matrix mentioned in 1 above. The preferred alternative was determined from this evaluation to be Alternative 2 – Repair Identified Problem Areas.

3. LIFT STATION

The lift station alternative was recommended as mentioned in IV.C. above. The preferred alternative was determined to be Alternative 1 – Rehabilitate Existing Lift Station with New Submersible Pump, Controls and Fixed Backup Generator.

F. FINANCIAL IMPACT OF PROJECT

A summary of the funding strategy for this project is shown in Table 2. The majority of the project costs would be paid by grants awarded to the Town of Jordan for use on this project. The remaining cost would be paid by the Town of Jordan with bond financing from a 20-year low interest loan from the State Revolving Fund (SRF) loan program. The loan would be paid off through a cost of approximately $10.86 per month increase to each user (Dwelling Unit). The existing sewer rate is $8.50 per month to each user. Most public financing agencies consider an annual sewer rate that is greater than 0.9% of the median household income to be above the target rate, or a high cost utility. The 2000 census indicates the median household income for the Jordan area is $26,250. Therefore, the proposed monthly sewer rate of $19.39 per month is 0.89% of the median household income, or right at the target rate. When combined with the water rate, the combined target rate calculation results in 100.37% of the target rate. The Town of Jordan should be eligible for a loan rate of 3.75% from the SRF.

TABLE 2 - PROJECT FINANCING SUMMARY

Funding Sources	**Contribution**
TSEP Grant	$ 750,000
CDBG Grant	$ 450,000
DNRC Grant	$ 100,000
State Revolving Fund (SRF) loan	$ 142,953
Total Estimated Cost of Project	**$1,422,953**

V. AFFECTED ENVIRONMENT

A. PLANNING AREA

The Town of Jordan lies in the northwest quarter of Section 17, T18N, R38E, M.P.M. Jordan is located approximately 83 miles northwest of Miles City, MT (Figure 1). The Town of Jordan study planning area is shown in Figure 2.

B. EXISTING FACILITIES

The following information is from the PER.

The Town of Jordan's wastewater system consists of three major facilities, a gravity sewer collection system, a lift station, and a lagoon wastewater treatment facility. The collection system and an original lagoon were constructed in 1951. The lift station, force main and current lagoon system were constructed in 1968. The system has required minimal repairs or upgrades. In 1989 three sewer main extensions totaling approximately 1,200 lineal feet were constructed using 8" PVC piping. Six new manholes were also added. The collection system contains approximately 21,632 lineal feet of vitrified clay pipe, 880 lineal feet asbestos concrete and 2,028 lineal feet of PVC ranging in size from 4 inches to 10 inches. The section of sewer main between manholes 17 and 18 is directly under an abandoned irrigation ditch that leads to stormwater intrusion during large storm events. Groundwater elevation in the area has not been shown to cause sewer inflow conditions. The shallowest groundwater documented in the area is from the Lower Fort Union Aquifer at approximately 165 to 200 feet below ground surface. Large sections of the collection system were originally constructed with slopes and pipe diameters that are less than the minimums required by current standards. Town personnel have documented four damaged areas of the collection system during routine maintenance. One of the damaged areas lies directly beneath an abandoned irrigation ditch and has been observed as a source of inflow and/or infiltration during large precipitation events.

The lift station is located near the southeast edge of Town and pumps all the wastewater to the lagoon through a six-inch diameter asbestos concrete pipe (force main).

The existing treatment facility consists of a two-cell facultative lagoon system that was designed and permitted to have a continuous discharge to Big Dry Creek. The lagoons have an overall depth of seven to eight feet with an operating depth of five feet. Portions of the interior slopes are in poor condition, due to advanced erosion caused by wave and ice action. The lagoon liner was believed to have been constructed using an "impervious" material, which was locally excavated clay. The total design storage capacity of the lagoons was 14 million gallons. Due to sludge accumulation, current total storage capacity of the system is approximately 8.5 million gallons.

C. FLOW PROJECTIONS

The per capita flow is estimated to be 100 gallons per capita per day (gpcd) and the average flows were estimated at 36,492 gallons per day (gpd). The 2000 census data estimated population of the Town at 364 people. The design population is 423 with a growth rate predicted at less than 1% per year over the 20-year planning period. Inspections performed by Town personnel have found the conveyance system to have a few problem areas which may result in conveyance system losses due to broken clay sewers.

D. NATURAL FEATURES

As indicated in the PER, according to the Natural Resource Conservation Service, the soils in the region of the lagoons consist primarily of silty loams and coarse loams.

The soils near the proposed lagoon improvements consist primarily of the Glendive-Havre Complex and Lonna-Cambeth series. Lonna-Cambeth soils consist primarily of 12 to 14 inches of silty loam overburden with more plastic loam and packed silt deposits extending below that depth to approximately 60 inches. These soils are notable because they are highly effervescent and alkaline (generally with a pH in the 8.6 range). The Glendive-Havre soils are classed as a course to fine-loamy soil to a depth to approximately 60 inches with some clay to plastic component at the 36 – 60 inch depth. These soils are also notable due the highly effervescent nature and can be alkaline to neutral on the pH scale. These soils appear to be suitable for lagoon embankment material, but likely don't have the clay component necessary to form an effective liner. The existing ponds were constructed using these materials and imported clay material from the local area. The exterior embankments are in good condition, but the interior embankments are deteriorating due to lack of protection from erosion. The proposed plan calls for the new lagoons to be riprapped to lessen the interior dike erosion.

Big Dry Creek is the only surface water source near the Town of Jordan. Big Dry Creek is classified as C-3 stream on the States 303(d) list for impaired stream segments. Big Dry Creek is listed as impaired with respect to ammonia, nitrate nitrogen, total phosphorus, total Kjehldahl Nitrogen (TKN) and littoral vegetative cover (stream-side). These impairments impact beneficial uses including aquatic life, primary contact recreation (swimming, wading) and warm water fish. The USGS has identified Big Dry Creek as a perennial stream with periods of disconnected pools of standing water with established communities.

Ammonia limits, with respect to acute and chronic toxicity to aquatic species, were also considered. Current average discharge results in less than 10 mg/L of ammonia concentration being discharged. Current in-stream standards for Big Dry Creek from DEQ-7 reflect that the acute standard is 36.1 mg/L, at a background pH of 7.0, and 1.32 mg/L at a pH of 9.0 for a stream segment with no salmonids present. The chronic standard (at a pH of 7.0) ranges from approximately 6 mg/L in winter to 2.5 mg/L in summer. The chronic standard (at a pH of 9.0) ranges from approximately 0.5 mg/L in winter to 0.2 mg/L in summer.

VI ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS

1. Land Use – The proposed improvements will not require any land acquisition. There are no land use conflicts anticipated, and the proposed facility will not impact prime farmland.

2. Floodplain and Wetlands – The FEMA floodplain map for this area indicates the majority of the project is located in the 100-year floodplain, but specific elevation for the flood waters are not mapped. However, anecdotal information indicate that floodwaters have surrounded the existing lagoon in the

past, but have never come close to overtopping the embankments, and the existing dikes have not been subject to erosion due to floodwaters. The existing lagoon has been in this location for nearly 40 years with no problems associated with flooding. Solutions to ensure that the floodwater will not damage the proposed facility will be implemented.

There are some limited areas that may be identified as wetlands in the general area proposed to be disturbed by the project. It does not appear that the proposed project will disturb these areas. However, in the event that wetlands need to be disturbed to construct the project, these areas will be properly delineated per US Army Corp of Engineers 404 permit standards and a 404 permit would be required.

3. The Montana State Historical Preservation Office (SHPO) was contacted and the site investigated to determine whether there is a probability of impacting cultural or historic resources. The SHPO did not identify any cultural or historical sites in the project area. The surface area has been largely disturbed due to being within the footprint of existing sanitary sewer infrastructure. As a result, SHPO is not requiring a cultural and historical survey.

4. Fish and Wildlife –The U.S. Fish & Wildlife Service reviewed the proposed project and determined that the Service does not anticipate impacts to any federally listed threatened, endangered, candidate or proposed species. The Montana Fish, Wildlife and Parks (FWP) indicated there are no species of concern in the project area that will be impacted by the proposed project.

5. Water Quality – The proposed wastewater treatment facility will continue to discharge to Big Dry Creek. Treated effluent will be higher quality than what has been discharged previously. Repairs to the existing lift station will prevent future discharge of untreated wastewater from overflowing into Big Dry Creek during power outages. Repairs to the sewer mains identified in the proposed project will result in correcting significant amounts of untreated sewage from leaking to groundwater. Short term water quality impacts may occur during construction, but those activities will be required to utilize best management practices to prevent significant sedimentation release to Big Dry Creek.

6. Air Quality – Air quality impacts with respect to wastewater treatment and disposal consist of noxious odors and the conveyance of airborne pathogens. Some air pollution due to particulate matter is likely during construction. Every effort would be made to minimize these impacts. However potential health impacts from the spread of airborne pathogens are considered remote. The treatment facilities are somewhat remote, downwind and public access is limited.

7. Public Health – The selected improvements will provide a better, more up-to-date wastewater treatment facility which will improve the quality of life for the community, make the community more desirable, and ease the maintenance responsibilities of the Town's operations staff. Reduction of the public health risk associated with groundwater and surface water pollution by the existing wastewater system would have an obvious positive impact on the community.

8. Energy – Mechanical mixers are proposed as a means of keeping the primary lagoons exposed to ambient air to enhance oxidation. These units may be of a solar or electrical powered variety. A small increase in energy usage could result, but is not considered significant. A direct short-term impact of energy

resources will be the energy consumed during the construction phase.

9. Noise - Short-term impacts from excessive noise levels may occur during the construction activities. The construction period will be limited to normal daytime hours to avoid early morning or late evening construction. No significant long-term impacts from noise will occur.

B. UNAVOIDABLE ADVERSE IMPACTS

Short-term construction related impacts (i.e., noise, dust, traffic disruption, etc.) will occur but should be minimized through proper construction management. Energy consumption during construction cannot be avoided.

VII. LISTING AND EVALUATION OF MITIGATION, STIPULATIONS AND OTHER CONTROLS ENFORCEABLE BY THE AGENCIES

A. Air Quality – Dust control will be required through the contract documents during construction to mitigate the temporary impact of construction. Watering during construction is a common and effective measure to control dust.

B. Vegetative Cover – Some vegetative cover will be disturbed during construction, but will be mitigated by reseeding of disturbed areas. Reseeding should be effective, as it will be part of the construction contract.

C. Historical and Archaeological Sites – Although no impacts to cultural or historical resources are expected, if any archaeological resources are discovered during construction, the Montana State Historic Preservation Office (SHPO) must be notified.

D. Aesthetics – The new wastewater treatment facility will be constructed at the existing treatment location and will be somewhat larger than the existing facility. The potential of additional odor from the new treatment facility should be reduced due to proposed mixing; however, the treatment facility is typically downwind of the community, so there is no anticipated effect. The existing lift station will be rehabilitated and the lid raised approximately three feet above the current structure. The structure will be backfilled with embankment and revegetated. The rehabilitated structure may be more visible than what is present at the site, but does not appear to be aesthetically significant.

E. Locally Adopted Environmental Plans and Goals – The PER was subject to continuous review by the Town of Jordan to ensure compatibility with land use plans and regulations.

F. Density and Distribution of Population and Housing – The proposed project is designed to accommodate less than 1 percent growth per year over the next twenty years, so is not expected to increase density or housing starts within the community.

G. Controls Enforceable by Agencies – DEQ will review construction plans and specifications and issue a Stormwater Discharge General Permit for Construction Activity. A floodplain development permit may be required by Garfield County or DNRC as appropriate for construction in the floodplain. A construction dewatering permit may also be required. The sludge from the existing lagoon is proposed to be removed and applied to a local field (land applied) in accordance with EPA 503 regulations. An application

permit will need to be secured from EPA in advance of sludge removal and land application.

VIII. PUBLIC PARTICIPATION

A public meeting was conducted on April 6, 2006 at Town Hall. Chad Hanson from GREAT WEST ENGINEERING. (Consulting Engineer) and Linda Twitchell from Great Northern Development were present to summarize the alternatives being considered in the PER and to take comments from the public. Representatives from the consulting engineer and the Town presented the results of the facility plan. It was noted in the minutes of the public meeting that the only people in attendance were Town Officials and the Consultant representatives. The public notice was posted at prominent locations around town and reminders were sent out in the billing cycle preceding the meeting.

IX REFERENCE DOCUMENTS

The following document has been utilized in the environmental review of this project and is considered to be part of the project file: Preliminary Engineering Report, Sanitary Sewer System, prepared for the Town of Jordan, by GREAT WEST ENGINEERING, P.C., Billings Montana, April 2006.

X. AGENCIES CONSULTED

The following agencies have been contacted in regard to the PER, which determined the basis for the proposed wastewater treatment and collection system project:

1. The Montana Department of Fish Wildlife and Parks (FWP) reviewed the proposed project and had no specific comments relating to potential impacts on fisheries habitat or impacts to wildlife.

2. The U. S. Fish and Wildlife Service (FWS) reviewed the proposed project and had no specific comments relating to potential impacts on fisheries habitat or impacts to wildlife.

3. The Montana State Historic Preservation Office (SHPO) considered the impacts of the proposed project on historical sites and cultural resources. The Office indicated that this project has a low likelihood of impacting cultural properties and that a recommendation for a cultural resource inventory is unwarranted at this time. The Office asks to be contacted and the site investigated should cultural materials be inadvertently discovered during construction.

4. The U.S. Army Corps of Engineers reviewed the proposed project and indicated that if work is necessary to place fill material, either permanently or temporarily below the ordinary high water mark of Big Dry Creek or in a jurisdictional wetland, then a Department of Army permit may be required. The Corps of Engineers is responsible for administering Section 404 of the Clean Water Act, which regulates the excavation or placement of dredged or fill material below the ordinary high water mark of our nation's rivers, streams, lakes or in wetlands. A 404 permit will likely need to be secured for the project.

5. Department of Natural Resources and Conservation (DNRC) reviewed the proposed project and concurred with the Town’s engineer that the existing lagoon site is not in a mapped floodplain area. However the area is known to have potential for flooding and the

dikes will be maintained at an elevation sufficient to protect against flooding.

Recommendation for Further Environmental Analysis:

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

Rationale for Recommendation: Through the Preliminary Engineering Report (PER), prepared by Great West Engineering, and the public process involved, the Town of Jordan determined that the preferred wastewater treatment and lift station alternatives will allow the facility to meet the State design standards and will improve the operation and maintenance capabilities of their system. Through this EA, the DEQ has verified none of the adverse impacts of the proposed wastewater treatment and lift station improvement project are significant; therefore an environmental impact statement is not required. The environmental review was conducted in accordance with the Administrative Rules of Montana (ARM) 17.4.607, 17.4.608, 17.4.609 and 17.4.610. This EA is the appropriate level of analysis because none of the adverse effects of the impacts are significant. A Finding of No Significant Impact (FONSI) will be issued and legally advertised in the local newspaper and distributed to a list of interested agencies. Comments regarding the project will be received for 30 days before final approval is granted.

EA Prepared By:

Terry Campbell — Name
9/30/07 — Date

Approved By:

_____
(Print: name & title)

_____ _____
Signature Date